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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,448	06/10/2005	Thomas Netsch	PHDE020303US	3792

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
MEHTA, PARIKHA SOLANKI	

ART UNIT	PAPER NUMBER
3737	

NOTIFICATION DATE	DELIVERY MODE
05/23/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/538,448	NETSCH ET AL.	
	Examiner	Art Unit	
	PARIKHA S. MEHTA	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/15/10*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12,13 and 15-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12,13 and 15-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal filed on 15 Nov 2010, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-10, 12, 13 and 15-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 5, 6 and 10 recite steps and computer-implemented algorithms for "calculating current imaging parameters by transforming earlier imaging parameters by the geometrical transformation" or "operating on earlier imaging parameters with the calculated geometric transform to generate current imaging parameters". The present specification fails to set forth the computational steps, algorithms and hardware required to achieve such calculation in any detail, and the terms "calculating", "transforming" and "imaging parameters" do not have such specific definitions according to what is commonly accepted

in the art of image processing that a skilled artisan would be reasonably apprised of how to make and use the claimed invention without undue experimentation (*In re Wright*, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993).

In accordance with precedent case law (*In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)), the conclusion of lack of enablement is made based at least on an analysis of the following factors:

I. The breadth of the claims

As the terms are commonly accepted in the art of image processing, "calculating" and "transforming" are so generic and broad as to encompass a wide variety of embodiments ranging from, for example, matrix calculations to complex pixel analysis to simple gain scaling, all of which would require very specific, distinct computational steps and programs in order to be functionally executed. In other words, not only is the breadth of these terms in the context of image processing is extremely vast, but Applicant has not even described the "calculating", "operating" and "transforming" in the specification in any kind of detail that would at least convey to a skilled artisan what the intended scope of these terms should be. As such, a skilled artisan would not have been able to carry out the steps (or construct the computer algorithm) required to practice the full scope of the claims, which encompass any and all means and processes for transforming any and all types of imaging parameters (*In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)).

Even if Applicant were able to persuasively show that a skilled artisan would be reasonably able to try to operate all possible geometrical transformations known in the art of image processing in order to satisfy the claimed "transforming", absent any specific disclosure of an algorithm or particular process used by the Applicant, he would still have to attempt to apply all such transformations on every known imaging parameter across all known imaging modalities.

With specific regards to claim 7, although that depending claim establishes the transform as including "with a computer algorithm, maximizing a similarity measure that represents a similarity between the current reference slice images and the earlier reference slice images", the recited "maximizing" and "similarity measure" suffer the same deficiencies of breadth as previously discussed for "calculating", "operating", "transforming" and "imaging parameters".

II. The amount of direction provided by the inventor

The specification does not adequately define "calculating", "operating", "transforming" and "imaging parameters" or teach one of ordinary skill in the art how to select the appropriate algorithms or parameters necessary to achieve such claim limitations (*In re Colianni*, 561 F.2d 220, 222-23, 195 USPQ 150, 152 (CCPA 1977). While it has previously been held that, where a recited term has more than one meaning in the art, the Office should select a definition based upon an understanding of what applicant intends it to mean (*Genentech v. Wellcome Foundation*, 29 F.3d 1555, 1563-64, 31 USPQ2d 1161, 1167-68 (Fed. Cir. 1994)), Applicant has not even provided sufficient description of those steps to facilitate such interpolation of the intended meaning. The broad reference to Fitzpatrick and Maintz on page 2 of the present disclosure as teaching prior art calculation and transformation of imaging parameters also does not provide adequate guidance as to the intended meaning of the terms, as those references are found to lack any specific description of the algorithms and hardware definitively required to execute such calculation and transformation of imaging parameters. In other words, even the disclosures of the references cited by the Applicant fail to provide sufficient basis upon which a skilled artisan would be able to discern the intended nature of the claimed invention.

III. The existence of working examples

While the mere lack of working examples itself does not render the invention non-enabled, in the context of the deficiencies identified under other critical factors herein, the present lack of any example, such as an experiment or details of a functional computer algorithm, serves to underscore the inadequacy of the amount and detail of information provided by the Applicant in the supporting disclosure. Such lack of example also contributes to the lack of clarity as to Applicant's intended meaning of the terms "calculating", "operating", "transforming" and "imaging parameters".

IV. The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

As the disclosure provides no guidance as to the practical and specific meaning of "operating" , "transforming" and "imaging parameters", a skilled artisan would be required to try to operate all known, possible computational algorithms on all known, possible imaging parameters, across all known, possible imaging modalities in order to try to make and use the claimed invention. Even then, such artisan could not be certain that they had achieved the invention in accordance with Applicant's intent, as Applicant has provided no guidance as to what specific qualitative or quantitative outcomes are achieved by such step (or algorithm, for those pending claims directed towards a programmed computer or computer-readable

medium). Accordingly, it is reasonable to conclude that a skilled artisan would be required to pursue an undue amount of experimentation in order to attempt to achieve the claimed invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, it is unclear how the two earlier reference slice images can have the same ("a first") position but a non-parallel orientation relative to each other.

In claim 19, it is unclear how a method is further limited by a recitation of a plurality of images (i.e., elements).

Response to Arguments

5. Applicant's remarks and arguments filed in the appeal brief of 15 Nov 2010 have been carefully considered. However, upon further consideration, the claims are found to be non-enabled and are additionally rejected herein, thereby reopening prosecution. As the claimed invention is not enabled, and as the Examiner is unable to reasonably discern exactly what Applicant intended to claim by way of the present application, the previous prior art rejection is vacated and no new prior art rejection is presented herein. Examiner respectfully clarifies that the lack of a prior art rejection herein should not in any way be construed as an indication that the claims are directed towards a novel invention in view of the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARIKHA S. MEHTA whose telephone number is (571)272-3248. The examiner can normally be reached on M-F, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
Supervisory Patent Examiner, Art Unit 3737

/Parikha S Mehta/
Examiner, Art Unit 3737